OIL CONSERVATION DIVISION

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-122
Revised 10-1-78

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test: [X] Initial [ ] Annual [ ] Special			Test Date: 05-02-91	
Company: Chevron U.S.A.	Connection:			
Pool: Eumont	Formation: ~~Eumont~~ Queen		Unit:	
Completion Date: 04-25-91	Total Depth: 3850	Plug Back TD: 3710	Elevation:	Farm or Lease Name: W.A. Ramsey NCT-A
Csg. Size: 5½ / Wt.: 14 / d: / Set At: 3850	Perforations: From 3080 To 3554			Well No.: 28
Tbg. Size: 2 3/8 / Wt.: 4.7 / d: 1.995 / Set At: 3035	Perforations: From OPEN To END			Unit: O / Sec.: 34 / Twp.: 21 / Rge.: 36
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: Single		Packer Set At: 3035		County: Lea
Producing Thru: Tubing	Reservoir Temp. °F: 104 @ 3035	Mean Annual Temp. °F: 60	Baro. Press. – P_a: 13.2	State: New Mexico
L: 3035 / H: 3035	Gg: .711	% CO_2: 1.42	% N_2: 2.86	% H_2S:	Prover:	Meter Run: 2.067	Taps: Flange

FLOW DATA						TUBING DATA		CASING DATA		
NO.	Prover Line Size	X Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	Duration of Flow
SI						181		PKR		72 hrs.
1.	2	X 1.500	38	19.00	67	165		PKR		45 mins.
2.	2	X 1.500	38	25.00	67	151		PKR		45 mins.
3.	2	X 1.500	38	43.00	67	148		PKR		45 mins.
4.	2	X 1.500	38	60.00	67	137		PKR		45 mins.
5.										

RATE OF FLOW CALCULATIONS

NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P_m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	12.76	31.19	51.2	.9933	1.186	1.009	473
2.	12.76	35.78	51.2	.9933	1.186	1.009	543
3.	12.76	46.92	51.2	.9933	1.186	1.009	712
4.	12.76	55.43	51.2	.9933	1.186	1.009	841
5.							

NO.	P_r	Temp. °R	T_r	Z
1.	.07	527	1.35	.982
2.	.07	527	1.35	.982
3.	.07	527	1.35	.982
4.	.07	527	1.35	.982
5.				

Gas Liquid Hydrocarbon Ratio: DRY GAS Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons: DRY Deg.
Specific Gravity Separator Gas: .711 XXXXXXXXXX
Specific Gravity Flowing Fluid: XXXXX
Critical Pressure: *669 P.S.I.A. P.S.I.A.
Critical Temperature: *388 R R

P_c 194.2 P_c^2 37.7

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1		186.1	34.6	3.1
2		175.4	30.8	6.9
3		180.4	32.5	5.2
4		178.1	31.7	6.0
5				

(1) $\frac{P_c^2}{P_c^2 - P_w^2} = 6.283$ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 4.849$

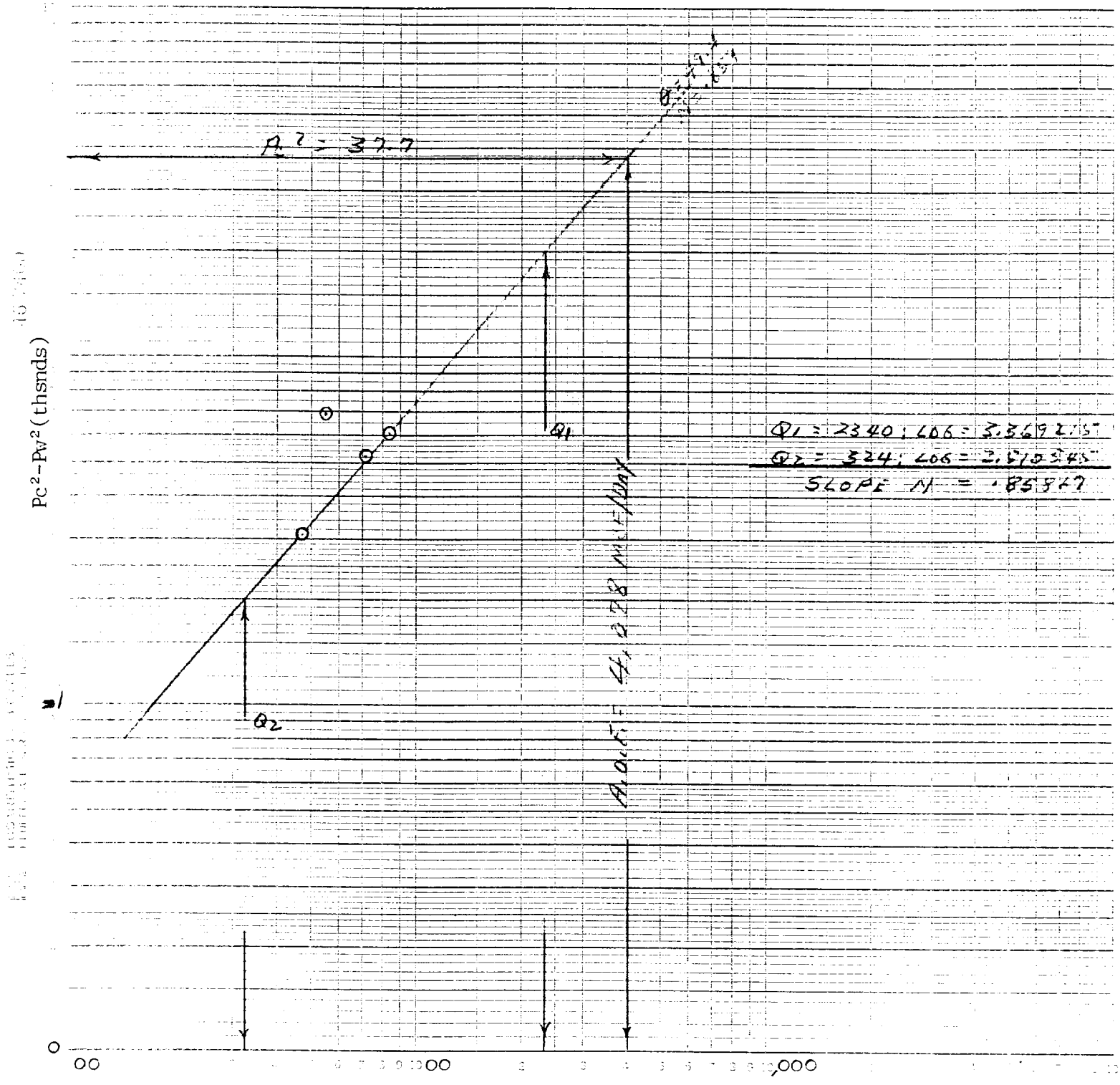
AOF = Q $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n = 4.078$

Absolute Open Flow: 4,078 Mcfd @ 15.025 Angle of Slope θ: 49.4 Slope, n: .859

Remarks: *=corrected to 1.42% CO_2 & 2.86% N_2
NO FLUID PRODUCED DURING TEST

Approved By Division	Conducted By:	Calculated By:	Checked By:
	Pro Well Testers	BM	BM

Chevron U.S.A.
W.A. Ramsey NCT-A, Well #28
O - 34 - 21 - 36
Lea County, New Mexico
05-02-91



PRO WELL TESTING & WIRELINE

FIELD DATA SHEET

COMPANY Chevron U.S.A. COMPANY REPRESENTATIVE Danny Lovell

LEASE NAME & NO. W.A. Ramsey NCT-A #28 TEST DATE & TIME 05-02-91 7:15AM

COUNTY Lea STATE New Mexico ELEVATION _____ FORMATION _____

UNIT O SECTION 34 TOWNSHIP 21-S RANGE 36-E

TEST TYPE X INITIAL _____ ANNUAL _____ SPECIAL _____ TYPE WELL Single

COMPLETION DATE _____ TD@ _____ PBTD@ _____ PKR@ _____

CONNECTION Air METER RUN 2.067" TAPS Flange

CASING SIZE 5½ WT. 6.5# DIA. _____ SET@ _____

TUBING SIZE 2 3/8 WT. 4.7# DIA. _____ SET@ _____

PERFORATIONS FROM _____ TO _____

PRODUCING THRU Tubing

TIME DATE	ELAP. HR	TBG. PRES	CASING PRES	W/H TEMP	METER OR PROVER PRES	DIFF	TEMP	ORIF. SIZE	CHOKE SIZE 645	MCFD	REMARKS
7:15 AM	.00	181	PKR		38	19	67°	1.500	22/64	493	Start Test
7:30	.15	166	PKR		38	19	67°	1.500	22/64	493	
7:45	.30	165	PKR		38	19	67°	1.500	22/64	493	
8:00	.45	165	PKR		38	19	67°	1.500	22/64	493	End Rate I
8:15	1.00	151	PKR		38	25	67°	1.500	24/64	566	
8:30	1.15	151	PKR		38	25	67°	1.500	24/64	566	
8:45	1.30	151	PKR		38	25	67°	1.500	24/64	566	End Rate II
9:00	1.45	148	PKR		38	43	67°	1.500	28.5/64	742	
9:15	2.00	148	PKR		38	43	67°	1.500	28.5/64	742	
9:30	2.15	148	PKR		38	43	67°	1.500	28.5/64	742	End Rate III
9:45	2.30	137	PKR		38	59	67°	1.500	31.5/64	870	
10:00	2.45	137	PKR		38	59	67°	1.500	31.5/64	870	
10:15	3.00	137	PKR		38	60	67°	1.500	31.5/64	877	End Test

NO FLUID

Laboratory Services

1331 Tasker Drive
Hobbs, New Mexico 88240

Telephone: (505) 397-3713

FOR: Pro Well Testing & Wireline
Attention: Mr. Merv Buecker
P. O. Box 791
Hobbs, New Mexico 88240

SAMPLE IDENTIFICATION: W. A. Ramsey NCT-A #28
COMPANY: Chevron U. S. A.
LEASE:
PLANT:

SAMPLE DATA:
DATE SAMPLED: 5/2/91 10:00AM
ANALYSIS DATE: 05-02-91
PRESSURE - PSIG 137.00
SAMPLE TEMP. °F 69.00
ATMOS. TEMP. °F 73.00

GAS (XX) LIQUID ( )
SAMPLED BY: Glen (Pro Well)
ANALYSIS BY: Rolland Perry

REMARKS:

COMPONENT ANALYSIS

COMPONENT		MOL PERCENT	GPM
Oxygen	(O2)		
Hydrogen Sulfide	(H2S)		
Nitrogen	(N2)	2.86	
Carbon Dioxide	(CO2)	1.42	
Methane	(C1)	80.16	
Ethane	(C2)	8.57	2.287
Propane	(C3)	4.03	1.107
I-Butane	(IC4)	0.54	0.176
N-Butane	(NC4)	1.24	0.390
I-Pentane	(IC5)	0.36	0.131
N-Pentane	(NC5)	0.31	0.112
Hexane	(C6)	0.51	0.209
Heptanes Plus	(C7+)	0.00	0.000
		100.00	4.412

BTU/CU.FT. - DRY	1172	MOLECULAR WT	20.5942
AT 14.650 DRY	1168		
AT 14.650 WET	1148	26# GASOLINE -	0.582
AT 15.025 DRY	1198		
AT 15.025 WET	1177		
SPECIFIC GRAVITY -			
CALCULATED	0.711		
MEASURED	0.000		

COMPANY : CHEVRON USA   LEASE : W A RAMSEY A   WELL NO. : 28
UNIT : 0   SECTION : 34   TOWNSHIP : 21
L : 3035   H : 3035   L/H : 1   G/GMIX : 0.711
%CO2 : 1.42   %N2 : 2.86   H2S :   DATE :5 2 91
d : 1.995   Fr :0.018231   GH : 2157.9   RANGE : 36

VOL 1 :	473	PSIA 1 :	178.2	RESV.TEMP	104.4
VOL 2 :	543	PSIA 2 :	164.2		
VOL 3 :	712	PSIA 3 :	161.2	SHUT-IN PR=	194.2
VOL 4 :	841	PSIA 4 :	150.2		

PCR : 669
TCR : 388

LINE	RATE 1		RATE 2		RATE 3		RATE 4	
	'1ST	'2ND	'1ST	''2ND	'1ST	'2ND	'1ST	'2ND
1 QM	0.473	0.473	0.543	0.543	0.712	0.712	0.841	0.841
2 TW	534	534	534	534	534	534	534	534
3 Ts	564.4	564.4	564.4	564.4	564.4	564.4	564.4	564.4
4 T	549.2	549.2	549.2	549.2	549.2	549.2	549.2	549.2
PR (est)	0.27		0.25		0.24		0.22	
5 Z(est)	0.944	0.942	0.947	0.944	0.947	0.944	0.949	0.945
6 TZ	518.6	517.4	519.9	518.7	520.2	518.6	521.3	519.2
7 GH/TZ	4.161	4.170	4.151	4.160	4.148	4.161	4.140	4.156
8 eS	1.169	1.169	1.168	1.169	1.168	1.169	1.168	1.169
9 1-e-S	0.144	0.145	0.144	0.144	0.144	0.144	0.144	0.144
10 Pt	178.2	178.2	164.2	164.2	161.2	161.2	150.2	150.2
11 Pt2 /1000	31.8	31.8	27.0	27.0	26.0	26.0	22.6	22.6
12 Fr	0.018231	0.018231	0.018231	0.018231	0.018231	0.018231	0.018231	0.0182311
13 Fc=FrTZ	9.454	9.434	9.479	9.456	9.484	9.454	9.503	9.466
14 FcQm	4.47	4.46	5.15	5.13	6.75	6.73	7.99	7.96
15 L/H(FcQm)	20.0	19.9	26.5	26.4	45.6	45.3	63.9	63.4
16 Fw	2.889081	2.882411	3.818157	3.808452	6.568624	6.546440	9.184576	9.1458282
17 Pw2	34.6	34.6	30.8	30.8	32.6	32.5	31.7	31.7
18 Ps2	40.5	40.5	36.0	36.0	38.0	38.0	37.1	37.1
19 Ps	201.2	201.2	189.6	189.6	195.0	195.0	192.6	192.5
20 P	189.7	189.7	176.9	176.9	178.1	178.1	171.4	171.3
21 Pr	0.28	0.28	0.26	0.26	0.27	0.27	0.26	0.26
22 Tr	1.42	1.42	1.42	1.42	1.42	1.42	1.42	1.42
23 Z	0.942	0.942	0.944	0.944	0.944	0.944	0.945	0.945

Pc =	194.2	Pc2 =	37.7
Pt2 =	31.8	Pw =	186.1
	27.0		175.4
	26.0		180.4
	22.6		178.1
Pc2-Pw2=	3.1	Pw2 =	34.6
	6.9		30.8
	5.2		32.5
	6.0		31.7
n =	0.859		
Pc2/(Pc2-Pw2) =	12.261		
	5.431		
	7.278		
	6.277		
[Pc2/Pc2-Pw2]n =	8.611		
	4.279		
	5.501		
	4.845		
AOF= Q	4.073		
	2.323		
	3.917		
	4.075		

FORM C122-D